



# UNITED STATES PATENT AND TRADEMARK OFFICE

19  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,586	03/21/2005	Koji Oike	2005_0362A	8254
52349	7590	08/17/2006	EXAMINER	
WENDEROTH, LIND & PONACK L.L.P. 2033 K. STREET, NW SUITE 800 WASHINGTON, DC 20006			DAVIS, OCTAVIA L	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/528,586	OIKE ET AL.
	Examiner	Art Unit
	Octavia Davis	2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 3/21/05 (Figs. 1-6) is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/21/05.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Tokumoto (6,988,421).

Regarding claim 1, Tokumoto discloses a rotation angle detecting device and torque detecting device comprising a torsion bar 31 including an input shaft 32, an output shaft 33 and a torsion bar, a first gear 34 including a gear is coupled to the input shaft 32, a first detecting section A1, B1 placed at a center of the gear A, a second gear 35, 36 including gears is coupled to the output shaft 33 and a second detecting section A2, B2 placed at a center of the gear B (See Col. 3, lines 39 – 50).

Regarding claims 2 and 3, the first detecting section A1, B1 includes a first magnet and a first detecting element of magnetism confronting the first magnet and the second detecting A2, B2, A3, B3 section includes a second magnet and a second detecting element of magnetism confronting the first magnet (See Col. 4, lines 1 – 13 and 51 – 55).

Regarding claims 4 and 5, the first and second gears 34, 35 have an identical number of teeth and the gear A has a different number of teeth from gear B (See Col. 4, lines 26 – 33), and an absolute rotation angle is calculated from a difference between respective absolute angles of the gears (See Col. 6, lines 35 – 47 and 51 – 53) and a torque is calculated from a difference between an absolute rotation angle of gear A and that of gear B multiplied by the teeth ratio of the gear A versus gear B (See Col. 7, lines 11 – 25).

Regarding claims 6 and 7, absolute rotation angles and correction angles are stored in advance in a volatile memory and used for calculating absolute rotation angles and torque (See Col. 6, lines 41 – 47 and 57 – 64).

Regarding claims 8 and 9, the detector gives a warning when a difference between an absolute rotation angle of the gears A and B exceeds a predetermined value (See Col. 9, lines 3 – 7 and 20 – 31 and Col. 8, lines 28 – 37).

### ***Conclusion***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maeda et al (6,957,590) disclose a rotational angle detecting apparatus and torque detecting apparatus.

Sakai et al (6,948,382) disclose an angle detection device and torque sensor incorporating an angle detection device.

Tokumoto et al (6,935,195) disclose a rotational angle detecting apparatus, torque detecting apparatus and steering apparatus.

Uehira et al (6,880,254) disclose a torque detector.

Uehira et al (6,987,384) disclose a device for detecting rotation angle and torque.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

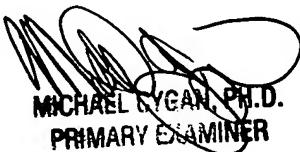
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OD/2855

8/14/06



MICHAEL CYAN, PH.D.  
PRIMARY EXAMINER